

ABSTRACT

The present invention comprises a microelectromechanical positioner to achieve substantially translational positioning of a platform without rotational motion, thereby maintaining a constant angular orientation of the platform during movement. A linkage mechanism of the positioner can comprise parallelogram linkages to constrain the rotational motion of the platform. Such linkages further can comprise flexural hinges or other turning joints at the linkage pivots to eliminate the need for rubbing surfaces. A plurality of the linkage mechanisms can be used to enable translational motion of the platform with two degrees of freedom. A variety of means can be used to actuate the positioner. Independent actuation of the anchor links of the linkage mechanisms with rotary electrostatic actuators can be used to provide controlled translational movement of the platform.